

Applicants herein amend claims 1, 7, 9, 10, 11, 12, and 13 and deleted claim 8 to overcome the rejection under 35 U.S.C. 112, second paragraph only. These amendments were made to more clearly and distinctly describe the matter the Applicants regard as the invention. Applicants specifically assert that none of the amendments to any of the claims is made responsive to the rejection under 35 U.S.C. 102(b), and in no way are any of the present amendments to be interpreted as further limiting the subject claims in light of the cited prior art. Those claims, and the claims that depend therefrom, are now believed to be allowable.

Amended claim 1 is directed to an apparatus for removing frozen food product from a container comprising a scoop 20 engageable with the product on one side of the container, the scoop having a channel 22 formed extending along one side with a trailing edge 26 extending along one portion of one side of the channel and a leading edge 24 extending along a portion of the opposite side of the channel, the trailing edge 26 extending outwardly further than the leading edge 24 for engaging and scraping product from the exposed side of the container when the scoop is moved relative to the container. As the Applicants' scoop is turned, the trailing edge 26 scrapes a layer of food product. As the Applicants' scoop continues to turn relative to the container, the scraped layer is guided along the channel until it emerges as a scraped layer at the first end portion 28 where it is available to a dispensing assembly.

Respectfully traversing the rejection of claim 1 under 35 U.S.C. 102(b), all of the elements of amended claim 1 are not present in the cited Whiteside patent, particularly, the trailing edge of the channel extending outwardly further than the leading edge of the channel for engaging and scraping product from the exposed side of the container. Referring to paragraph 5 of the Office Action, it is asserted that Whiteside teaches an apparatus including a scoop member mounted adjacent the open end of a container, the scoop member including a curved, tapered channel having a semicircular cross-section, the channel including an extending trailing edge 20 along one side of the channel, with an

opening in the scoop member adjacent the channel end having the largest cross sectional area, means for providing relative rotation between the scoop member and the container, and a device 23 associated with the scoop member for dispensing the product.

Applicants have carefully reviewed and considered the Whiteside patent, and respectfully assert that no disclosure or teaching in Whiteside shows a channel in which the trailing edge of the channel extends outwardly or sidewardly further than the leading edge of the channel. Instead, it is taught in Whiteside that the scoop member has a relatively flat head “with a recess from its center to the periphery at one side, with an inclined wall 19, and extending spirally from the center with a lip 20 parallel with and projecting beyond the bottom surface of the head with a connecting edge sufficiently sharp to imbed into the surface of the ice cream and deflect the ice cream upwards into the cavity 19” when the handle is rotated. At the diametrically opposite side of the head, a projection 21 serves to scrape the ice cream away from the wall when the handle is rotated. “Adjacent the lip 20 a slot 19” permits the upward passage of the film or shaving of ice cream into the space formed by the wall 19 and the slope of this wall directs the ice cream so ejected by the lip to flow or crowd toward the center of the handling device C and emerge from the head 18 into or toward the hollow center of core of the shank 17”. In other words, the trailing edge of the Whiteside device uses a lip 20 to shave a sheet of ice cream that passes into a channel 19”. The Whiteside device continues turning and shaving until the volume of ice cream that passes into the channel forces its way to the center of the spiral channel 19 and then up the shank 17. The Whiteside patent teaches turning the apparatus “until the dipper is filled, and contents rise due to the pressure of the ice cream, during which operation any air in the dipper passes out to the bore of the shank 17 . . . or through small vents.” Applicants’ trailing edge of the channel that extends outwardly further than the leading edge is not found in the Whiteside patent. As a result, Applicants’ trailing edge shaves a strip of ice cream that is guided through the channel, in tact, and makes its way to the dispenser, still in the form

of a shaved strip. By comparison, the Whiteside trailing edge uses a lip that extends below for the length of the trailing edge to scrape a sheet of ice cream that gradually fills the channel, compressing the ice cream to form a channel-shaped mass of ice cream that is pushed to the middle of the spiral for cutting and dispensing. For the foregoing reasons, claim 1 is not anticipated by the Whiteside patent, and amended claim 1 is believed to be in allowable condition.

Claims 2 through 6 depend from amended claim 1 and add still further distinguishing limitations thereto. For the foregoing reasons, these claims, in combination with the limitations of independent claim 1, are believed to be patentably distinguishable over the cited prior art.

Independent claim 7 is directed to an apparatus for forming scoops of food product including an elongated arcuate shaped scoop member including an arcuately curved tapered channel portion with a trailing edge extending further outwardly than the leading edge. Further, the channel portion has an opening in the scoop member adjacent to one end and a central enlarged spherical portion adjacent that opening. As the scoop member is rotated relative to the container of food product, the trailing edge engages and gathers the food product into the channel portion from the container, guiding the gathered food product out the opening and toward the spherical portion of the scoop member. Once the food product reaches the spherical portion of the scoop member, additional turning of the scoop causes the food product to roll back on itself thus forming a spherical scoop serving shape.

Respectfully traversing the rejection of claim 7 under 35 U.S.C. 102(b), all of the elements of amended claim 7 are not found in the reference. In particular, the tapered channel portion with a trailing edge extending outwardly further than the leading edge, and the spherical portion adjacent the opening of the other end of the channel portion are not found in the Whiteside device. Using a tapered channel, with trailing edge extending outwardly further than the leading edge, Applicants' device, shaves a strip of food

product from the container and guides the food product to the opening at the other end of the channel portion. The food product strip then moves through the opening to the adjacent spherical portion for shaping. The strip of food product rolls over on itself within the spherical portion until the desired shape and serving size is achieved. The Whiteside trailing edge extending below the recess, scrapes ice cream and packs it into the recess until it reaches the dipper placed inside the opening at the end of the recess. In the Whiteside reference, the ice cream is compressed into a mass and then pushed into the dipper under pressure. The scoop of ice cream is formed when the ice cream is cut away from the ice cream pushed into the dipper. For the foregoing reasons, and the reasons stated during the traversal of claim 1, which are incorporated by reference herein, amended claim 7 is believed to be in allowable form.

Independent claim 8 is deleted because it is incorporated into amended claim 7.

Independent claim 9 is directed to an apparatus for dispensing food product from an end of a container consisting of a scoop member that includes a tapered channel portion with a trailing edge, extending outwardly further than the leading edge, that engages and directs the food product into and along the channel portion to be removed at the opening at the end of the scoop member.

Respectfully traversing the rejection of claim 9 under 35 U.S.C. 102(b), all of the elements of amended claim 9 are not found in the reference, particularly the tapered channel portion with a trailing edge extending further than the leading edge. For the reasons stated in the traversal of amended claims 1 and 7 which are incorporated by reference herein, amended claim 9 is believed to be in allowable condition.

Independent claim 10 is directed to an apparatus for removing frozen food products from a container comprising a support structure for holding the container with an open side of the container exposed, as product is removed therefrom, a scoop assembly mounted adjacent to the open side of the container for movement relative thereto, said scoop assembly including an elongated member having a cavity formed on

one side, said cavity extending between opposed side edges, one of which extends outwardly from the cavity further than the other, means for supporting said scoop assembly in position to have the more outwardly projecting side edge engage the food product in the container such that movement of the scoop assembly relative to the container will cause food product in the container to move into the cavity and toward one end thereof, an opening in said cavity adjacent to said one end through which the food product can escape from the cavity, and means to produce relative movement between the scoop assembly and the container.

Respectfully traversing the rejection of claim 10 under 35 U.S.C. 102(b), all of the elements of amended claim 10 are not found in the reference, particularly the cavity with one side edge that extends outwardly further from the cavity than the other. The side edge that extends outwardly further than the other side edge causes the food product to be shaved in strips. The strips follow the length of the cavity towards the opening as the scoop is moved relative to the container. For the reasons stated in the traversal of amended claims 1 and 7 which are incorporated by reference herein, amended claim 10 is believed to be in allowable condition.

Amended claims 11, 12 and 13 depend from amended claim 10 and add still further distinguishing limitations thereto. For the foregoing reasons, those claims, in combination with the limitations of independent claim 10, are believed to be patentably distinguishable over the prior art and allowable.

Applicants submit that the present invention is substantially different from the Whiteside reference both functionally and physically. The present invention is directed to a scoop that is shaped to shave ice cream in a layer or strip starting at the outside edge of the container so that the ice cream rolls up and back around on itself forming a ball. The process can be compared to a cutting lathe that then redirects the cutting strip to roll around itself. There is no scraping and forcing into a molded cavity as in the Whiteside apparatus. The Whiteside reference discloses a two piece rotating cover and dipper

system that is mostly flat, and whose purpose is to scrape ice cream from a container and force it into a second piece which forms the scraped bits into a ball form and then is extracted from the cover assembly in order to allow the product to be served.

This distinction is important because the Whiteside device negatively impacts the quality of the ice cream by changing the physical property of the product specifically by reducing what the industry calls “overrun”, which is incorporated air. Applicants’ invention maintains the quality of the ice cream by minimizing overrun reduction. Minimizing overrun reduction is desirable from both a quality and economic basis.

Applicants' invention is a scoop that scrapes the product from the container as it self forms the desired serving shape. Because Applicant's invention maintains the physical properties of the product by not reducing overrun, the quality and yield of the product are not reduced when the product is served. The Whiteside invention first scrapes the product from the container and then forces the product into the desired shape. When the product is forced into the serving shape, the air is compressed out of the product, reducing overrun. The reduced overrun causes a reduction in quality and overall yield. As contrasted with the Whiteside invention, Applicants’ invention maintains product properties and delivers yields comparable with manual or hand scooping for superior product quality at delivery and superior economic performance.

Applicants’ scoop is less complex than the Whiteside apparatus. The Whiteside system requires an insulated container to house the ice cream. The scraping and dipping apparatus is fitted through the lid of this insulated container. Further the Whiteside system requires two steps to serve ice cream. First the cover of the ice cream container is rotated to scrape the top of the ice cream and force it into the shank containing an ice cream dipper with an elongated handle. Under pressure, the ice cream starts to rise in the shank letting the operator know the dipper is full. Second, the operator turns the dipper to cut the ice cream and then removes the dipper from the container to serve the ice cream.

Applicants' apparatus uses a one piece, one step process that works in three dimensions. As the scoop rotates around the container, a strip of food product is scraped away, directed through a channel, reaches the serving portion, and then rolls up and around on itself forming the desired shape within the serving portion. The food product, now in the desired serving size and shape, is then directly removed from the apparatus. Applicants' device essentially directs the ice cream out of the container into the dipper rather than inserting the dipper into the ice cream and then extracting the dipper from the container as in the Whiteside device.

The claims have been modified to more clearly describe the invention and no new matter has been added to the application and drawings as filed. Claims 1, 7, 9, and 10 are independent claims directed at an apparatus for dispensing food products that scrapes the product from the top of the open container that self forms the desired size and shape of the serving. Claim 8 has been deleted. Claims 2, 3, 4, 5, 6 depend on claim 1 and claims 11, 12 and 13 depend on claim 10.

Applicants believe that all the claims of this application contain limitations which patentably distinguish them over the cited prior art and their allowance is hereby respectfully requested. If the Examiner has any comments or suggestions for placing the present claims in better condition for allowance, Applicant's undersigned attorney would appreciate a telephone call at the number indicated below.

Respectfully submitted,

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AMENDED CLAIMS

1. An apparatus for removing frozen food product from a container comprising:

a scoop engageable with the product on one side of the container, the scoop having a channel formed extending along one side thereof;

a trailing edge extending along a portion of one side of the channel;

a leading edge extending along a portion of the opposite side of the channel, the trailing edge extending outwardly further than the leading edge for engaging and removing product from the exposed side of the container when the scoop is moved relative to the container.

2. The apparatus as set forth in claim 1 wherein the channel is tapered lengthwise, having a larger cross-sectional area at one end of the channel than at the other end.

3. The apparatus as set forth in claim 1 wherein one side of the channel is substantially straight and the opposite side of the channel is curved along the length of the channel.

4. The apparatus as set forth in claim 1 wherein the trailing edge, the leading edge and the sides of the channel are curved.

5. The apparatus as set forth in claim 1 wherein the cross-sectional shape of the channel is substantially semi-circular.

6. The apparatus as set forth in claim 2 wherein the scoop has an opening in communication with the channel adjacent one end thereof, the opening having the larger cross-sectional area than the channel, whereby as the product moves along the channel it passes through the opening.

7. An apparatus for forming scoops of food product including:
an elongated arcuate shaped scoop member mounted adjacent an open end of a container of food product, said scoop member including an arcuately curved, tapered

channel portion, a leading edge extending along one side of the channel portion, a trailing edge extending along the opposite side of the channel portion, said trailing edge extending outwardly further than said leading edge, an opening in the scoop member adjacent to one end of the channel portion, and a central enlarged spherical portion adjacent the opening;

means for rotating the scoop member relative to the container of food product, the trailing edge engaging the food product and gathering the food product into the channel portion from the container as the scoop member is rotated relative to the container, the channel portion guiding the gathered food product toward the opening and toward the spherical portion of the scoop member.

8. (deleted)

9. An apparatus for dispensing food product from an end of a container including:

a scoop member mounted adjacent to the container end, said scoop member including a channel portion with a leading edge extending along one side of the channel portion, a trailing edge extending along the opposite side of the channel portion, said trailing edge extending outwardly further than said leading edge for engaging the food product in the container and directing it into and along the channel portion;

an opening through the scoop member adjacent one end of the channel portion;

means for rotating the container relative to the scoop member whereby the scoop member gathers food product from the container, the channel portion being tapered to force the gathered food product through and along the channel portion toward the opening in the scoop member; and

a device for removing the food product from the opening in the scoop member as the container is rotated relative to the scoop member and food product is removed from the container.

10. An apparatus for removing frozen food products from a container of said product comprising:

a support structure for holding the container with an open side of the container exposed, as product is removed therefrom,

a scoop assembly mounted adjacent to the open side of the container for movement relative thereto, said scoop assembly including an elongated member having a cavity formed on one side, said cavity extending between opposed side edges, one of which extends outwardly from the cavity further than the other, means for supporting said scoop assembly in position to have the more outwardly projecting side edge engage the food product in the container such that movement of the scoop assembly relative to the container will cause food product in the container to move into the cavity and toward one end thereof, an opening in said cavity adjacent to said one end through which the food product can escape from the cavity, and

means to produce relative movement between the scoop assembly and the container.

11. The apparatus of claim 10 wherein the means for producing relative motion between the scoop assembly and the container includes means to control the amount of food product that is scooped from the container each time relative movement is produced therebetween.

12. The apparatus of claim 10 wherein the container is a cylindrical container, one end of which is open to expose the food product contained therein, the scoop assembly being positioned adjacent to said exposed end of the container and extending substantially from the center of the exposed end to the edge thereof whereby the scoop assembly removes food product from the container in a circular path.

13. The apparatus of claim 10 wherein the cavity in the scoop assembly is curved in shape and one end of the cavity is deeper than the opposite end, and said

opening in said deep end through which the scraped food product passes when the scoop assembly and container are moved relatively to one another.